



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,482	09/16/2003	Kousaku Yoshimura	Q77503	9632

7590 01/30/2006

SUGHRUE MION, PLLC  
2100 Pennsylvania Avenue, NW  
Washington, DC 20037-3213

EXAMINER
----------

SHAH, MANISH S

ART UNIT	PAPER NUMBER
----------	--------------

2853

DATE MAILED: 01/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

78

<b>Office Action Summary</b>	<b>Application No.</b> 10/662,482	<b>Applicant(s)</b> YOSHIMURA ET AL.	
	<b>Examiner</b> Manish S. Shah	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 January 2006.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-5 and 7-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 7-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
       Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
       Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. Note: The amendment after final rejection filed on 01/12/2006 has been entered.  
The rejections based on the newly cited reference(s) follow.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-5 & 7-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohya et al. (# US 6890070) in view of Kasahara (# US 6838135).

Ohya et al. discloses an inkjet recording method including the steps of applying ink to the ink receiving layer of inkjet recording medium to form an image, wherein the inkjet recording medium including support; and an ink receiving layer disposed on the support (column: 7, line: 1-10), the ink receiving layer containing at least fine polymer particles (two or more kinds of polymers) and having porous structure (column: 7, line: 10-35), wherein fine polymer particles are vinyl type copolymer latexes (column: 8, line: 35-65), wherein a pore volume in the ink receiving layer at the pore diameter equal to the average particle diameter of the fine polymer particle is not less than  $20 \text{ ml/m}^2$  ( $20 \times 10^{-3} \text{ ml/cm}^2$ ) (column: 9, line: 40-45). They also disclose that the image receiving layer has a thickness of 60 micro meter (column: 22, line: 5-11), so the ink receiving

Art Unit: 2853

layer has a pore volume per unit thickness is  $20 \times 10^{-3} / 60 = 7.5 \times 10^{-4}$  ml/cm<sup>2</sup>/μm. They also disclose that the second particles of the fine polymer particles constitute the porous structure of the ink-receiving layer (see Examples; column: 21, line: 40-65). They also disclose that the ink-receiving layer further contains a cross-linking agent and mordant (see Examples). They also disclose that the total volume of the pores in the ink-receiving layer is at least 80% (see Examples), and the maximum peak in the pore radius distribution of the ink-receiving layer is 2 to 20 nm (see Examples). They also disclose that the fine polymer particle have an average particle diameter of 3.0 micrometer (column: 9, line: 55-67). They also disclose that the ink-receiving layer further contains a water-soluble resin, which is selected from poly vinyl alcohol or modified substance thereof, gelatin, cellulose derivative (column: 8, line: 35-60), and mixing ratio of the fine polymer particle and binder is in the range of 2:1 to 20:1 (column: 9, line: 30-35). They also disclose that the content of the water-soluble resin is 4 to 25% by weight (see Examples). They also disclose the partially saponified poly(vinyl alcohol) have a degree of saponification of 70%-100% (column: 8, line: 50-60).

Ohya et al. differs from the claim of the present invention is that the content of the fine polymer particle is 50% by mass or more of solid content in the ink receiving layer.

Kasahara teaches that for inhibiting the color fading of the image recorded by the inkjet, ink receiving layer includes the fine organic polymer particle (column: 5, line: 45-66), wherein the content of the fine polymer particle is 50% by mass or more of solid content in the ink receiving layer (column: 12, line: 5-15; column: 5, line: 45-66).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the ink-receiving layer of Ohya et al. by the aforementioned teaching of Kasahara in order to inhibiting the color fading of the image recorded by the inkjet, which gives high quality printed image.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-21 have been considered but are moot in view of the new ground(s) of rejection.

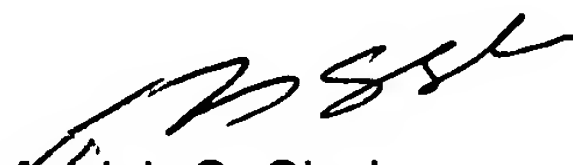
### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Manish S. Shah whose telephone number is (571) 272-2152. The examiner can normally be reached on 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2853

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Manish S. Shah  
Primary Examiner  
Art Unit 2853

MSS

1/26/06